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ENUMERATION AND DESCRIPTION OF THE SEPTORIAS OF NORTH AMERICA.

BY GEORGE MARTIN, M. D.

(Continued from page 41.)

28. SEPTORIA CHIONANTHI, Cke. Hedwigia, 1878, p. 38; Sylloge III, p. 496; Rav. F. A. N., 25.

Spots none or obliterated; perithecia dark or nearly black, subglobose, semi-immersed, clustered, numerous, hypophyllous, 100 μ in diam.; sporules hyaline, linear, obtuse, 8 x 1—1½ μ. On leaves of *Chionanthus Virginica*. South Carolina.

29. SEPTORIA CIRRHOSA, Winter. Journ. Mycol. I, p. 122.

"Spots scattered or confluent, subrotund or irregular, pale brown, whitish in the center, margin yellowish, indeterminate, seven millim. broad; perithecia amphigenous, loosely gregarious, semi-immersed, depressed-globose, opening by a broad pore, black, 100—130 μ in diam.; sporules cylindrico-filiform, often flexuose, acute at both ends, hyaline, tinted with green, mostly 3—5-septate, 30—45 x 2—2½ μ." On living leaves of *Staphylea trifolia*, Missouri.

30. SEPTORIA CIRSII, Niessl., Sylloge III, p. 550.

Spots brown, dark gray in the center, subrotund, epiphyllous, 3—5 millim. broad; perithecia brown, membranaceous, innate, slightly prominent, scattered or "gregarious," 100 μ in diam.; sporules hyaline, linear, straight or subflexuous, ends obtuse, "8—12 septate, 40—60 x 1½—2 μ." On leaves of *Cirsium altissimum*, Delaware.

31. SEPTORIA CONSIMILIS, E. & M. Journ. Mycol. I, p. 100; Ellis, N. A. F., No. 1,602.

Spots brown, dead, irregular, ½—1 cm. in diam., border indefinite; perithecia brown, subglobose, innate, scattered, amphigenous, 90—100 μ; sporules hyaline, filiform, multinucleate, slightly curved, ends obtuse, 30—45 x 2—2½ μ. On cultivated lettuce, New York.

32. SEPTORIA CONSOCIA, Pk. Bot. Gaz. V, p. 34; Sylloge III, p. 521.

"Perithecia closely gregarious, amphigenous, black, 65—75 μ in diam.; sporules filiform, nearly straight, 15—20 μ long. On living and languishing leaves of *Polygala senega*, associated with an *Aecidium*." Michigan.

33. SEPTORIA COPTIDIS, B. & C. N. A. Fungi, 436; Sylloge III, p. 526.

"Spots reddish, with a red margin; sporules filiform, straight, 25 μ long." On *Coptis*, Wisconsin.

34. SEPTORIA CORNICOLA, Desm. Sylloge III, p. 492.

Spots grey, nearly round, 4—5 millim. broad, border dark purple; perithecia dark brown, globose-depressed, scattered, mostly epiphyllous, 100—110 μ in diam.; sporules hyaline, cylindrical, curved, 2—4-septate, 30—40 x 2—2½ μ. On *Cornus*. Pennsylvania, Delaware and Missouri.

35. SEPTORIA CORYLINA, Pk. 34th Rep. S. Mus., p. 44; Sylloge III, p. 506.

"Spots suborbicular, scattered, brown or red brown, border grey-brown; perithecia few, minute, dark brown, very prominent, epiphyllous; sporules filiform, curved, hyaline, 35—45 μ long." On *Corylus rostrata*. New York.

36. SEPTORIA CRYPTOTÆNIÆ, E. & Rau, n. s.

Spots white, thin, irregular, one millim. broad, border obsolete; perithecia brown, subglobose, very delicate, amphigenous, 90—95 μ in diam.; sporules hyaline, tinted with green, cylindrical, ends slightly acute, curved, 24—30 x 1½ μ. On *Cryptotænia Canadensis*. Pennsylvania.

37. SEPTORIA CUCURBITACEARUM, Sacc. Sylloge III, p. 527.

"Spots white, subcircular or slightly angular, dry; perithecia lenticular, with a broad aperture, 70—80 μ in diam.; sporules narrowly vermicular, tortuous, 60—70 μ, septate, hyaline." On languishing leaves of *Cucurbita*. North America.

38. SEPTORIA CURTISIANA, Sacc. Sylloge III, p. 561; *Septoria Tritici*, B. & Curt.

"Perithecia hysteriform in pallid spots on the stems; sporules slender." On culms of *Triticum*. Probably a *Rhabdospora*. Pennsylvania.

39. SEPTORIA DALIBARDÆ, Pk. 38th Rep. N. Y. S. Mus., p. 97; Ellis, N. A. F., No. 1,608.

Spots brown, subrotund, whitish or cinereous in the center, 1—2 millim. broad, border reddish-brown; perithecia black, subglobose, depressed, few in a spot, epiphyllous, 75—80 μ in diam.; sporules hyaline, filiform, nearly straight, 45—60 x 1 μ, "38—50 μ long," Pk. Differs from *S. Woldsteinia* in the spores, which are much longer. On leaves of *Dalibarda repens*. New York.

40. SEPTORIA DENTARIÆ, Pk. 38th Rep. N. Y. S. Mus., p. 97.

Spots large, subcircular, indefinite, greenish; perithecia black, very delicate, slightly prominent, numerous, epiphyllous, 95—100 μ in diam.; sporules hyaline, linear, nearly straight, 15—30 x 1 μ, oozing out in yellowish or amber-colored threads. On leaves of *Dentaria diphylla*. New York.

41. SEPTORIA DIERVILLÆ, E. & E. Journ. Mycol. I, p. 44, March, 1885.

Spots dark brown, 2—3 millim. broad, border mostly thick, swollen, raised more on the upper surface, more or less shaded, purplish black; perithecia hypophyllous, small, black, innate, erumpent, 65—90 μ in diam.; sporules hyaline, with a slight tint of green, filiform, often strongly curved, nucleolate, 25—35 x 1—1½ μ. On *Diervilla trifida*. Massachusetts.

S. Diervillæ, Pk., 38th Rep. N. Y. State Mus., p. 98, is apparently the same, but the 38th Rep. was not given to the public till 1886.

42. SEPTORIA DIFFORMIS, C. & Pk. 29th Rep. N. Y. S. Mus., p. 48; Sylloge III, p. 493.

"Spots suborbicular, brown; perithecia aggregated, black, amphigenous; sporules profuse, linear, straight or curved, hyaline, 15 μ long, ejected in white or glaucous masses." On living leaves of *Vaccinium Pennsylvanicum*. New York.

43. SEPTORIA DOLICHI, B. & C., N. Am. Fungi, No. 449; Sylloge III, p. 509.

"Spots white, margin broad, yellow; sporules straight, subfusiform, 3-septate, 40 μ long." On leaves of *Dolichos*. South Carolina.

44. SEPTORIA DRYINA, Cke. Grev. XII, p. 25; Sylloge III, p. 505; Rav., F. A., No. 783.

Amphigenous; spots orbicular, white, one millim. broad, border red, narrow; perithecia few, punctiform, black, 80—130 μ in diam.; sporules linear, curved, plurinucleate, hyaline, 50—60 x 1½ μ. On leaves of *Quercus falcata*. South Carolina.

45. SEPTORIA EMACULATA, Pk. & Clinton. N. Y. S. Rep.; Sylloge III, p. 510.

"Perithecia broad, scattered, prominent, black; sporules filiform, curved or flexuous, nucleolate, 50—87 μ long." On living leaves and pods of *Lathyrus palustris*. New York.

46. SEPTORIA EQUISITI, Desm. Sylloge III, p. 576.

Spots light grey, oblong, 2 x 1 millim., sometimes confluent, border brown, narrow; perithecia few, scattered, flattened, very delicate or wanting, innate, covered, 250—500 μ in diam.; sporules hyaline, subfusiform, 1—3-septate or pluriguttulate, mostly curved, 26—40 x 3—4 μ, exuded in light, amber-colored masses. On *Equisetum*. Probably a *Phleospora*. Iowa.

47. SEPTORIA ERIGERONTIS, Pk. 24th Rep. N. Y. S. M., p. 87; Grev. III, p. 8; Sylloge III, p. 547; Ellis, N. A. F., No. 1,129.

Spots pallid to pale brown, round or irregular, 2—4 millim. broad, border brown, raised; perithecia black, subglobose, stomatous, clustered, prominent, epiphyllous, but visible on the under surface, 80—90 μ in diam.; sporules hyaline, filiform, subflexuous, entire, 35—40 x 1½ μ. New York. On *Erigeron; Septoria erigerontes*, Pk., No. 410 and *S. Erigerontis*, B. & C., No. 411; Sylloge III, p. 547, appear to be identical.

48. SEPTORIA EXAMINANS, B. & C. Grev. III, p. 8; Sylloge III, p. 486.

"Perithecia gregarious, punctiform, closely dotting portions of the whitened leaves; sporules filiform, flexuous, 25 μ or more in length. On *Ilex*. North America.

49. SEPTORIA FLAGELLARIS, Ell. & Evrht. Bull. Torrey Bot. Club X, p. 97; Ellis, N. A. F., No. 1,152.

Spots reddish-brown, subrotund, dry, becoming pallid in the center, 1—2 millim. in diam., border elevated; perithecia brown, sublenticular, innate, slightly prominent, epiphyllous, 80—120 μ in diam., 1—3 in a spot; sporules hyaline, linear, attenuated towards one end, nucleolate or 4—8-septate, 35—120 x 1½—2 μ. On leaves of *Calystigia sepium*. New Jersey. Differs from *S. convolvuli*, Desm., and *S. sepium*, Desm., in the size of the spores and color of the spots.

NOTE.—Among all the specimens of so-called "Septoria Fraxini," received from various parts of this country and as well as those distributed in various Exsiccati, we have never been able to find any with the characteristic sporules of *Septoria*. They are all about the same as those distributed in N. A. F., 743, as *Piggotia Fraxini*, B. & C., granular matter or small, imperfectly-developed sporules or spermatia and resembling very much the perithecia of a young or sterile *Sphaerella*, perhaps the early stage of growth of *Sphaerella convexula*, Schw.—EDS.

50. SEPTORIA FRAXINI, Desm. Sylloge III, p. 495; Rav. F. A., No. 24.

"Hypophyllous; perithecia minute, black, semi-innate, scattered in irregular spots; sporules cylindrical, ends truncate, nucleolate." On leaves of *Fraxinus*. Florida. My specimens in F. A. are sterile and of no value for description.

51. SEPTORIA FRUCTIGENA, B. & C. Grev. III, p. 10; Sylloge III, p. 558.

"Perithecia scattered, minute; sporules filiform, curved above, 35 μ long." On bleached fruit of *Passiflora*. South Carolina.

52. SEPTORIA GALIORUM, Ellis. Bull. Torrey Bot. Club IX, p. 74; Sylloge III, p. 543; S. Galli, N. A. F., 745.

Perithecia black, punctiform, minute, scattered, shining; sporules hyaline, filiform, slightly curved, faintly septate, 18—25 x 1½ μ. On dead stems of *Galium*.

53. SEPTORIA GAURINA, E. & Kellerman. Am. Nat. XVII, p. 1,165; Ellis, N. A. F., No. 1,133.

Spots light, dusky brown, rather irregular, border definite, slightly raised; perithecia numerous, brown, immersed, 100—140 μ in diam., visible on both surfaces of the leaves, but expelling the sporules in white threads upon the upper; sporules linear, curved, yellowish, granular, continuous or 1—3-septate, 50—75 x 2½—3 μ. On leaves of *Gaura parviflora*. Kansas.

54. SEPTORIA MACULOSA, Ger. Bull. Torr. Bot. Club IV, p. 64.

Spots grey or tawny, subcircular or elongated, three millim. broad; perithecia black, subglobose, innate, prominent, densely clustered in the center of the spot, epiphyllous, 84 μ in diam.; sporules hyaline, filiform, slightly curved, 25—40 x 1½ μ. On leaves of *Cupbua viscosissima*. New York and Pennsylvania. This species appears to differ in the arrangement of the perithecia and in the size and appearance of the sporules from *S. maculosa*, Lev.; Sylloge III, p. 513.

(To be continued.)

NOTES ON THE BOLETI OF THE UNITED STATES.

BY CHAS. H. PECK.

Fries, in *Hymenomycetes Europæi*, gives descriptions of ninety species of *Boleti* and adds, in an appendix, the diagnoses of ten more whose affinities are doubtful. Almost as many species have been recorded for this country, and probably when they shall have been as thoroughly collected and studied here as they have been in Europe the number of United States species will exceed the number of the European.

Fries makes the remark, "Nullum genus quam Boletorum magis me molestavit:" "No genus has troubled me more than that of the Boleti;" and he indicates in the context that one cause of the trouble was the imperfect manner in which many species had been described. In my efforts to write a monograph of the American species, I have encountered the same difficulty and, unless more information can be obtained concerning some species than is afforded by the descriptions of them, it will be necessary to follow the example of Fries and add an appendix of species of doubtful affinity. Among these may be mentioned *B. betula*, Schw., *B. Murrayii*, B. & C., and *B. alboater*, Schw. Fries refers the first one to *B. parasiticus*, Bull., but the viscose pileus, the stem with a reticulated bark, separating like the bark of birches, and the habitat on lignose earth, cast a doubt on the accuracy of this reference. *B. Murrayii* is said to have spores pale yellow, as in *P. castaneus*. This would indicate an affinity with the *Cariosi*, but the internal character of the stem is not indicated. If it shall prove to be stuffed or excavated, all doubt concerning its relationship will be removed.

To the description of *B. decipiens*, B. & C., is added the remark that its affinities are clearly with *B. flavidus* and its allies; but its dry pileus would exclude it from the *Viscipelles*, to which *B. flavidus* belongs. If there is no mistake in the description, the remark is misleading. I suspect it belongs to a very different group from *B. flavidus*. It is also said to be so much like *Paxillus porosus*, Berk., when dry, that it is scarcely distinguishable without examination of the spores. Now *Paxillus porosus* has the stem eccentric or lateral in its attachment to the pileus, and I have been kindly informed by Mr. Ravenel, who has collected *B. decipiens*, that it also sometimes has the stem eccentric or even lateral. The forms with central stem appear to be a good *Boletus*, but what shall we say of the other forms? They certainly are full of significance. They make the connection between *Boletus* and *Paxillus* (if *P. porosus* is a good *Paxillus*) too intimate to be comfortable. The assertion of Fries that *Boletus* is a sharply defined genus loses much of its force. We can no longer depend upon the spores of *P. porosus* to separate it from the *Boleti*, for *B. sphæroceph-alus*, Barla., has ovoid spores and *B. sphærosporus*, Pk., has subglobose spores. Nor can we rely on its eccentric or lateral stem, for *B. decipiens* obliterates this character. I see but two ways out of the dilemma, either of which will necessitate the removal of *P. porosus* from among the *Paxilli*. One is to refer both *P. porosus* and *B. decipiens* to a distinct genus; the other is to extend the characters of *Boletus* by inserting after the word "central" the words "or rarely eccentric or lateral." It is barely possible that Kalchbrenner's genus Boletinus may help us out of the difficulty, but the character on which it is founded is abstruse and needs confirmation. It should be sought in the two species under consideration, also in *B. pictus*, Pk, *B. paluster*, Pk., and in *B. ampliporus*, Pk., which last species is very closely allied to if not identical with *B. cavipes*, the type species of *Boletinus*. The trama which characterizes *Boletinus* is not satisfactorily shown in the dried specimens which I have examined. The character of the hymenium is very similar in all the species indicated above. *B. Russellii*, Frost, and *B. Morgani*, Pk., constitute a distinct group, *Luceripedes*, not recognized by Fries and thus far peculiar to this country. *B. alveolatus*, B. & C., as described by Frost in Bull. Buf. Soc. Nat. Sci., June, 1874, p. 102, appears to connect this group with the *Luridi*, to which it evidently belongs, as shown by the maroon-colored mouths of the tubes, although in Grev., Vol. I, p. 86, *B. alveolatus*, B. & C., is affirmed to be either *B. edulis* or very nearly allied to it.

B. Spraguei, Frost, is not sufficiently distinct from *B. vermiculosus*, Pk. The name of *B. robustus*, Frost, must be changed, inasmuch as it clashes with *B. robustus*, Fr. The Frostian plant is well marked, constant in its characters and very easily recognized. It merits the name—

BOLETUS EXIMIUS.—Pileus at first very compact, subglobose or hemispherical, subpruinose, purplish-brown or chocolate color, some-

times with a faint tinge of lilac, then convex, soft, paler, becoming smoky-red or pale chestnut color, flesh reddish-white or grayish; tubes at first concave or nearly plane, stuffed, colored nearly like the pileus, at length paler, depressed around the stem, minute, round; stem stout, generally short, equal or slightly tapering upward, abruptly narrowed at the base, minutely furfuraceous, colored like or a little paler than the pileus, purplish-gray within; spores subferruginous, .00045 to .0006 in. long, .0002 to .00025 in. broad; pileus 8—10 in. broad, stem 2—4 in. long, 6—12 lines thick. Woods and their borders, July to September. It belongs to the section *Edules*.

NEW SPECIES OF USTILAGINEAE AND UREDINEAE.

BY J. B. ELLIS AND B. M. EVERHART.

We have received from Prof. F. L. Scribner, of the Department of Agriculture, Washington, D. C., samples of several grasses, from the Rocky mountain region, infested with forms of *Ustilagineæ*, which we have not been able to refer satisfactorily to any published species and which we describe provisionally as new. Two *Puccinias* sent from Washington Territory by Mr. Suksdorf and an *Ustilago* sent from Missouri by B. T. Galloway are also included.

TILLETIA FUSCA, E. & E. (N. A. F., 1,895).—In ovaries of *Festuca microstachys*. Spores mostly globose, 19—22 μ or occasionally subovate, subelongated or otherwise irregular in shape, the surface covered with subhexagonal reticulations bounded by rather thick walls, about 1½ μ high, overspread and partially hidden by a dirty, subhyaline (gelatinous?) layer, which envelops the dark brown body of the spores, through which the projecting walls of the reticulations are scarcely prominent. *T. sphærococca*, Fisch., and *T. Rauwenhoffii*, Fisch., have rather paler, larger spores, with larger and more prominent reticulations.

TILLETIA MONTANA, E. & E.—In ovaries of *Sporobolus gracillimus*. Spores globose, 19—22 μ, or suboval, subelongated, 18—25 μ; epispore, consisting of two layers, the outer one hyaline, about 2½ μ thick, entirely covering the reticulations, which have thinner walls and are rather more irregular in shape than in the preceding species; the body of the spore is also lighter colored.

TILLETIA ASPERIFOLIA, E. & E.—In ovaries of *Sporobolus asperifolius*, has spores globose or subglobose, 17—20 μ, pale brown; hyaline envelope about two μ thick; reticulations subhexagonal or of irregular shape, with rather thick walls which rise through but hardly project above the surface of the enveloping, hyaline coat. Differs from both the preceding in its smaller spores and from the last also in the thicker walls of its reticulations, but is closely allied to the first-described species (*T. fusca*) which, however, has darker-colored spores.

TILLETIA CEREBRINA, E. & E.—In ovaries of *Deschampsia cæspitosa* has globose, dark brown spores, 22—28 μ in diam., outer hyaline coat about 2½ μ thick, barely covering the projecting edges of the thick-walled, irregular, subcerebriform reticulations. Differs from all the three preceding species in its larger spores.

USTILAGO MEXICANA, E. & E.—In the ovaries of some undetermined species of *Muhlenbergia*. Collected on the mountains near Batopilis, Mexico (alt., 8,850 ft.), by Dr. E. Palmer. Spores black or violet-black, smooth, globose, 5—6 μ or subelongated, 6—8 x 5 μ. Nearly every ovary on the affected plants is filled with the dusty mass of spores.

USTILAGO UNIOLÆ, E. & E.—In ovaries of *Uniola gracilis*, from Texas. Spores subglobose, echinulate-tuberculose, 7—10 μ, of a dull black color seen in mass. The affected ovaries are considerably swollen.

USTILAGO VIRIDIS, E. & E.—On *Setaria*, Louisiana. Rev. A. B. Langlois, No. 56. Forming a yellow-green coating on the outside of the seeds, which are swollen and become white and soft within; spores globose or nearly so, 4—5 μ, rough warted.

SOROSPORIUM CONSANGUINEUM, E. & E.—In ovaries of *Aristida Rusbyi*, Scribner. Collected in Northern Arizona by Mr. Rusby. Spore masses globose or subelongated, 50—70 μ in diam., composed of small (6—8 μ), polygonal spores with the epispore smooth or nearly so. Differs from *S. Ellisii*, Winter, in its smaller, smooth spores.

UROMYCES ARISTIDÆ, E. & E.—On leaves of *Aristida*, New Mexico. III. Sori linear, 1—2 millim. long, naked (when mature), dark ferruginous-brown; spores loosely compacted in the sori, elliptical or obovate, 25—35 x 18—22 μ, smooth, yellowish-brown, on long (80—100 μ), stout but deciduous pedicels, epispore not distinctly thickened above. Differs from *U. Poæ*, Rabh., and from *U. Dactylidis*, Otth., in its elongated sori and larger spores.

PUCCINIA SUBCIRCINATA, E. & E. (N. A. F., 1,840.)—On living leaves of *Senecio triangularis*, Mt. Paddo, Wash. Terr., August, 1885. W. N. Suksdorf, No. 197, I and III.

I. Aecidia gregarious, mostly surrounded by the sori of the teleutospores, mostly hypophyllous, shallow, about one half millim. in diam., with a spreading, toothed margin; spores globose, 12—15 μ or subelliptical, 20 x 12—15 μ, or subangular or otherwise irregular.

III. Mostly hypophyllous and arranged in a ring around the clusters of aecidia, but also more or less scattered and forming groups unaccompanied by aecidia or extending down on the petiole of the leaf; sori subhemispherical, lead-color, about one half millim. in diam., opening above in a circumscissile manner, with a distinct round opening, as if the top had been cut away, and discharging through this opening the abundant

reddish-brown spores after the manner of a *Melanconium*; spores elliptical, scarcely constricted, minutely granular-roughened, mostly rounded at both ends, scarcely thickened at the apex, 22—30 x 16—20 μ. On very short pedicels.

PUCCINIA NUDA, E. & E.—On leaves of *Arnica foliosa*, Falcon Valley, Wash. Terr., July, 1885. W. N. Suksdorf, No. 200.

III. Sori amphigenous, scattered or gregarious, round, black, about one millim. in diam., color of the leaf around the sori pale yellowish; spores oblong-elliptical or oblong-clavate, slightly constricted at the septum, strongly thickened at the apex, with a distinct, subhyaline, mostly oblique papilla, smooth, 35—45 x 19—22 μ, pale at first but finally becoming quite dark, especially above, and then the upper cell becomes broader and the apex more obtuse; pedicels 90—115 μ long; a few spores without septa 25 x 22 μ, obovate, on long pedicels, were seen mingled with the others; also a few uredo spores globose, 25—30 μ in diam., smooth or nearly so and without pedicels were seen in the same sori with the teleutospores. We have not seen *Puccinia arnicalis*, Pk., which was on *Arnica cordifolia*, from Colorado, and is said to have the "sori clustered, crowded or confluent, reddish-brown" and the teleutospores "scarcely constricted, minutely roughened" and the pedicel very short—characters which would seem to separate it from the Washington Territory specimens; nor does it seem properly referable to *P. Tanaceti*, to which it bears a general resemblance.

A NEW VOLUTELLA.

BY A. B. LANGLOIS.

VOLUTELLA ELLISII, Langlois.—Sporodochia sessile, hemispheric, of delicate rose color, $\frac{1}{3}$—$\frac{1}{4}$ millim. in diam.; hairs 80—100 x 3—4 μ, hyaline, continuous, arising from the margin and from the whole surface of the membranaceous receptacle; conidia oblong, 6—10 x 2½—3 μ, curvulate, obscurely guttulate; sporophores bacilliform, 18—20 x 3 μ.

(Sporodochiis sessilibus, hemisphericis, laete roseis, $\frac{1}{3}$—$\frac{1}{4}$ millim. latis; setulis 80—100 x 3—4 μ, erectis, hyalinis, continuis ex margine vel toto membranaceo receptaculo assurgentibus; conidiis oblongis, 6—10 x 2½—3 μ, curvulis, obscure guttulatis; sporophoris bacillaribus, 18—20 x 3 μ, in culmis, vaginis foliis mortui graminum ex genere panicum principoliter, ad loca humida et umbrosa.)

A very attractive little fungus, on dead pieces of grass, particularly of the genus *Panicum*, lying on damp ground, partially in shade. Pointe a' la Hache, La. (No. 1000.) The long, white bristles seem to be very fragile and to fall away easily. This volutella seems to be intermediate between *V. Arundinis*, Desm., and *V. Cerryana*, Sacc., differing from both in its hemispheric sporodochia and in its conidia of intermediate size.

NOTES ON FLORIDA FUNGI.--No. 13.

BY W. W. CALKINS, CHICAGO, ILLINOIS.

217. OPHIOBOLUS VERSISPORUS, E. & M.—On petioles of *Sabal Palmetto*; abundant.

218. STEREUM SUBPILEATUM, B. & C.—Abundant on old logs and the host of several parasitic species.

219. CYPHELLA CANDIDA, Fr.—Rare, on old cedar log.

220. PILACRE PETERSII, B. & Br.—In decayed places on living oaks.

221. CERCOSPORA LIQUIDAMBARIS, E. & E.—On leaves.

222. CERCOSPORA MAGNOLIÆ, E. & H.—On leaves; abundant.

223. TRAMETES RIGIDA, B. & Mont.—On old logs and limbs, but not very common.

224. TRAMETES VERSATILIS, B. & C.—On pine logs; rare.

225. ZYGODESMUS GRANULOSUS, Pk.—Common on old bark.

226. ZYGODESMUS FAINOSUS, B. & C.—Abundant.

227. HYPHELIA TERRESTRIS, Fr.—On the ground; white.

228. VALSA SABALINA, Cooke.—Abundant on petioles of *Sabal*.

229. FAVOLUS (Polyporus) FLACCIDUS, Fr.—Only one specimen found clinging to a dead *Myrica*; a fine thing.

230. AGARICUS CERVINUS, Schæff.—Common on old logs.

231. AGARICUS APPLICATUS, Batsch.—Rare, on a log.

232. AGARICUS ULMARIUS, Bull.—On logs; very large and fine.

233. AGARICUS LACCATUS, Scop.—The ground in pine woods sometimes carpeted with this species and its varieties.

234. AGARICUS MUSCARIUS, Fr.—Abundant and poisonous, but very attractive in appearance.

235. AGARICUS GALERICULATUS, Scop.—Very common.

236. AGARICUS CORTICOLA, Schum.—On limbs of living *Melia Azederach* in Jacksonville.

237. AGARICUS ABORTIVUS, B. & C.—Common on old logs in wet places. As Mr. Ellis suggests, this may be deformed *A. prunulus*.

238. AGARICUS OSTREATUS, Jacq.—A foot wide and as long; pure white.

239. AGARICUS CARBONARIUS, A. & S.—On logs; not common.

240. SPHÆRIA LEUCOBASIS, E. & M.—Abundant on petioles of *Sabal*.

241. SPHÆRIA NIGROANNULATA, B. & C.—Common on leaves of *Yucca aloifolia*.

242. SPHÆRIA SABALENSIS, Cooke.—On petioles of *Sabal*.

243. SPHÆRIA SABALICOLA, E. & M.—On *Sabal Palmetto* stems.

244. SPHÆRELLA SERRULATA, E. & E., n. sp.—On stems of *Sabal*. JOURN. MYCOL., Vol. III, No. 4.

245. SPHÆRELLA GLAUCA, Cke.—On leaves of *Magnolia glauca*.

246. SPHÆRELLA GORDONIÆ, Cke.—Abundant on leaves of "Bull Bay."

247. HYPOCREA CITRINA, Fr.—Rare, on rotten wood.

248. CORDYCEPS CAPITATA, Holmsk.—Found in sandy plantation field. Heads black, in this differing from the description; a fine species.

249. ARCYRIA PUNICEA, Pers.—On rotten logs in marshes; not common.

250. CONIOPHORA ELLISII, B. & C.—Formerly *Hymenochæte*, Grev. 4,162; rare on cedar logs.

NEW LITERATURE.

BY W. A. KELLERMAN.

"REVISIO MONOGRAPHICA GENERIS GEASTERIS MICH. E TRIBU GASTEROMYCETUM." Auctore Doct. G. B. De Toni. Revue Mycologique, 1er April, 1887.

"FUNGI SELECTI EXSICCATI PRÆCIPUE GALLIÆ ET ALGERIÆ." C. Roumeguere. l. c.

"FUNGI IN INSULA S. THOMÆ LECTI A CL A. MOLLER." Auctore Dr. G. Winter. Lipsiense. Ext. do Bol. da Soc. Brot. IV, 1886.

One hundred species are enumerated, many of them new to science, and, in that case, fully described. Two lithographic plates contain figures of ten new species of *Meliola* and one photographic plate shows mycelium and perithecium of two *Meliolæ* and one *Asterina*.

"REPORT FOR 1886 ON THE FUNGI OF THE EAST OF SCOTLAND." By James W. H. Trail. The Scottish Naturalist, January, 1887.

"ON THE INFLUENCE OF CRYPTOGRAMS ON MANKIND." By James W. H. Trail. The Scottish Naturalist, April, 1887.

"REVISION OF THE SCOTCH PERONOSPOREÆ." By James W. H. Trail. l. c.

"NEW SCOTCH MICROFUNGI." By J. W. H. Trail. l. c.

"THE MYCOLOGIC FLORA OF THE MIAMA VALLEY, OHIO." By A. P. Morgan. The Journal of the Cincinnati Society of Natural History. April, 1887. Continued from Vol. IX, p. 8.

"ORCHARD RUSTS." By A. B. Seymour, Cambridge, Mass. From Vol. IV, American Horticultural Report.

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